

Meat Science 59 (2001) III-XII



# Contents of Volume 57

## Number 1

- 1 The relationship between tenderness, proteolysis, muscle contraction and dissociation of actomyosin D.L. HOPKINS, J.M. THOMPSON (Australia)
- Production of mortadella: behavior of *Listeria monocytogenes* during processing and storage conditions L.S. BERSOT, M. LANDGRAF, B.D.G.M. FRANCO, M.T. DESTRO (Brazil)
- Optical evaluation of factors affecting appearance of bovine fat M. IRIE (Japan)
- Calcium ascorbate as a potential partial substitute for NaCl in dry fermented sausages: effect on colour, texture and hygienic quality at different concentrations
  O. GIMENO, I. ASTIASARÁN, J. BELLO (Spain)
- 31 Effect of erythorbic acid on cooked color in ground beef A.L. PHILLIPS, R. MANCINI, Q. SUN, M.P. LYNCH, C. FAUSTMAN (USA)
- A PCR-based test for species-specific determination of heat treatment conditions of animal meals as an effective prophylactic method for bovine spongiform encephalopathy
  C.I.B. KINGOMBE, E. LÜTHI, H. SCHLOSSER, D. HOWALD, M. KUHN, T. JEMMI (Switzerland)
- 43 Effects of dietary magnesium and duration of refrigerated storage on the quality of vacuum-packaged, boneless pork loins J.K. APPLE, J.R. DAVIS, L.K. RAKES, C.V. MAXWELL, M.R. STIVARIUS, F.W. POHLMAN (USA)
- Aldehyde reactivity with 2-thiobarbituric acid and TBARS in freeze-dried beef during accelerated storage Q. SUN, C. FAUSTMAN, A. SENECAL, A.L. WILKINSON1, H. FURR (USA)
- Temporal aspects related to the perception of skatole and androstenone, the major boar odour compounds H.L. DE KOCK, P.H. HEINZE, C.M. POTGIETER (South Africa), G.B. DIJKSTERHUIS (Denmark), A. MINNAAR (South Africa)
- 71 Fatty acid profiles in three stress genotypes of swine and relationships with performance, carcass and meat quality traits J. PIEDRAFITA, L.L. CHRISTIAN, S.M. LONERGAN (USA)
- 79 Influence of beef carcass stretching and chilling rate on tenderness of m. longissimus dorsi
  O. SØRHEIM, J. IDLAND, E.C. HALVORSEN, T. FRØYSTEIN, P. LEA, K.I. HILDRUM (Norway)
- Low stress pre-slaughter handling: effect of lairage time on the meat quality of pork
   M. DALL AASLYNG, P. BARTON GADE (Denmark)
- 93 Partial purification and characterisation of dipeptidyl peptidase II from porcine skeletal muscle M.A. SENTANDREU, F. TOLDRA (Spain)
- 105 Pro-oxidative effects of NaCl in microbial growth-controlled and uncontrolled beef and chicken K.S. RHEE, Y.A. ZIPRIN (USA)
- 113 AMSA membership application
- 115 Announcement

- 117 The influence of final conditions on meat colour in light lamb carcasses M.J. ALCALDE, A.I. NEGUERUELA (Spain)
- 125 Comparative study of low-field NMR relaxation measurements and two traditional methods in the determination of water holding capacity of pork H.C. BERTRAM, H.J. ANDERSEN, A.H. KARLSSON (Denmark)

- 133 Characterization of different strains of broiler chicken by carcass measurements, chemical and physical parameters and NIRS on breast muscle F. ABENI, G. BERGOGLIO (Italy)
- Evaluation of electrical stunning methods using alternative frequencies in commercial rabbits G. MARÍA, M. LÓPEZ, R. LAFUENTE, M.L. MOCÉ (Spain)
- 145 Electrical stimulation when more is less G.H. GEESINK, M.H.D. MAREKO, J.D. MORTON, R. BICKERSTAFFE (New Zealand)
- Diverse lamb genotypes. 3. Eating quality and the relationship between its objective measurement and sensory assessment E. SAFARI, N.M. FOGARTY, G.R. FERRIER, L.D. HOPKINS, A. GILMOUR (Australia)
- 161 Quantitative competitive (QC) PCR for quantification of porcine DNA C. WOLF, J. LÜTHY (Switzerland)
- Measuring pork color: effects of bloom time, muscle, pH and relationship to instrumental parameters M.S. BREWER, L.G. ZHU, B. BIDNER, D.J. MEISINGER, F.K. MCKEITH (USA)
- 177 Assessment of the antioxidant potential of natural food and plant extracts in fresh and previously frozen pork patties T.L. MC CARTHY, J.P. KERRY, J.F. KERRY, P.B. LYNCH, D.J. BUCKLEY (Ireland)
- 185 Estimation of the carcass composition of yearling bulls of "Asturiana de los Valles" breed from the dissection of a rib joint M. OLIVÁN, A. MARTINEZ, P. GARCIA, G. NOVAL, K. OSORO (Spain)
- 191 Instrumental colour classification of veal carcasses B. HULSEGGE, B. ENGEL, W. BUIST, G.S.M. MERKUS, R.E. KLONT (The Netherlands)
- 197 Cholesterol oxidation in frozen dark chicken meat: influence of dietary fat source, and α-tocopherol and ascorbic acid supplementation
  A. GRAU, R. CODONY, S. GRIMPA, M.D. BAUCELLS, F. GUARDIOLA (Spain)
- 209 Effect of connective tissue on the shape of reflectance spectra obtained with a fibre-optic fat-depth probe in beef H.J. SWATLAND (Canada)
- 215 Changes in biogenic amine and polyamine contents in slightly fermented sausages manufactured with and without sugar S. BOVER-CID, M. IZQUIERDO-PULIDO, M. CARMEN VIDAL-CAROU (Spain)
- 223 AMSA membership application
- 225 Announcement

- Detection of mechanically recovered meat and head meat from cattle in ground beef mixtures by multivariate analysis of isoelectric focusing protein profiles
  H.-J. SKARPEID, R.E. MOE, U.G. INDAHL (Norway)
- Assessment of meat fat content using dual energy X-ray absorption J.P. BRIENNE, C. DENOYELLE, H. BAUSSART, J.D. DAUDIN (France)
- Sensory quality and cooking loss of ham muscle (*M. biceps femoris*) from pigs reared indoors and outdoors A. JONSÄLL, L. JOHANSSON, K. LUNDSTRÖM (Sweden)
- 251 Effect of calcium chloride marination on bovine Cutaneus trunci muscle C.B. GONZALEZ, V.A. SALITTO, F.J. CARDUZA, A.A. PAZOS, J.A. LASTA (Argentina)
- Effect of rate of pH decline on muscle enzyme activities in two pig lines
   E. CLAEYS, S. DE SMET, D. DEMEYER, R. GEERS, N. BUYS (Belgium)
- 265 Effects of stress and high voltage electrical stimulation on tenderness of lamb *m. longissimus* G.H. GEESINK, M.H.D. MAREKO, J.D. MORTON, R. BICKERSTAFFE (New Zealand)
- 273 Shelf life of beef from local Spanish cattle breeds stored under modified atmosphere K. INSAUSTI, M.J. BERIAIN, A. PURROY, P. ALBERTI, C. GORRAIZ, M.J. ALZUETA (Spain)
- Role of cysteine endopeptidases (EC 3.4.22) in rabbit meat tenderisation and some related changes J.A. MESTRE PRATES, A.M.R. RIBEIRO, A.A. DIAS CORREIA (Portugal)

- 291 Survival and growth of Escherichia coli O157:H7, Yersinia enterocolitica and Salmonella enteritidis on decontaminated and untreated meat H. NISSEN, T. MAUGESTEN, P. LEA (Norway)
- 299 Two-dimensional visible/near-infrared correlation spectroscopy study of thawing behavior of frozen chicken meats without exposure to air Y. LIU, Y.-R. CHEN (USA)
- Differences in molecular structure among the porcine myosin heavy chain-2a, -2x, and -2b isoforms K. CHIKUNI, R. TANABE, S. MUROYA, I. NAKAJIMA (Japan)
- 319 Peptide inhibitors for angiotensin I-converting enzyme from enzymatic hydrolysates of porcine skeletal muscle proteins K. ARIHARA, Y. NAKASHIMA, T. MUKAI, S. ISHIKAWA, M. ITOH (Japan)
- 325 Effect of extraction buffer on estimating calpain and calpastatin activity in postmortem ovine muscle E. VEISETH (Norway), M. KOOHMARAIE (USA)
- 331 Antioxidative effect of dietary tea catechins on lipid oxidation of long-term frozen stored chicken meat S.Z. TANG, J.P. KERRY, D. SHEEHAN, D.J. BUCKLEY, P.A. MORRISSEY (Ireland)
- 337 AMSA membership application
- 339 Announcement

- 341 Classification of tough and tender beef by image texture analysis J. LI, J. TAN, P. SHATADAL (USA)
- 347 Tenderization of beef by lactic acid injected at different times post mortem P. BERGE (France), P. ERTBJERG, L.M. LARSEN, T. ASTRUC (Denmark), X. VIGNON (France), A.J. MØLLER (Denmark)
- 359 Consumer preferences for beef color and packaging did not affect eating satisfaction C.E. CARPENTER, D.P. CORNFORTH, D. WHITTIER (USA)
- 365 Composition assessment of raw meat mixtures using ultrasonics J. BENEDITO, J.A. CARCEL, C. ROSSELLO, A. MULET (Spain)
- 371 n-Alkane content of intramuscular lipids of Iberian fresh ham from different feeding systems and crossbreeding J.F. TEJEDA, C. GARCÍA, M.J. PETRÓN, A.I. ANDRÉS, T. ANTEQUERA (Spain)
- 379 The eating quality of meat of steers fed grass and/or concentrates P. FRENCH, E.G. O'RIORDAN, F.J. MONAHAN, P.J. CAFFREY, M.T. MOONEY, D.J. TROY, A.P. MOLONEY (Ireland)
- 387 Inulin as fat substitute in low fat, dry fermented sausages E. MENDOZA, M.L. GARCIA, C. CASAS, M.D. SELGAS (Spain)
- 395 Evolution of hydrophobic polypeptides during the ageing of exudative and non-exudative pork meat V.-J. MOYA, M. FLORES, M.-C. ARISTOY, F. TOLDRÁ (Spain)
- 403 Blast chilling and low voltage electrical stimulation influences on bison (*Bison bison bison*) meat quality J.A.M. JANZ, J.L. AALHUS, M.A. PRICE (Canada)
- 413 Effect of irradiation and packaging conditions after cooking on the formation of cholesterol and lipid oxidation products in meats during storage D.U. AHN, K.C. NAM, M. DU, C. JO (USA)
- Volatile production in irradiated normal, pale soft exudative (PSE) and dark firm dry (DFD) pork under different packaging and storage conditions D.U. AHN, K.C. NAM, M. DU, C. JO (USA)
- 427 Metmyoglobin reducing activity and colour stability of ovine longissimus muscle A.E.D. BEKHIT, G.H. GEESINK, J.D. MORTON, R. BICKERSTAFFE (New Zealand)
- Soy protein isolate added to vacuum-packaged chorizos: effect on drip loss, quality characteristics and stability during refrigerated storage
  M.I. PORCELLA, G. SÁNCHEZ, S.R. VAUDAGNA, M.L. ZANELLI, A.M. DESCALZO, L.H. MEICHTRI, M.M. GALLINGER, J.A. LASTA (Argentina)

- 445 AMSA membership and benefits
- 447 Announcement

# Contents of Volume 58

#### Number 1

- 1 Combined effects of NaCl and raw meat pH on water-holding in cooked sausage with and without added phosphate E.J. PUOLANNE, M.H. RUUSUNEN, J.I. VAINIONPÄÄ (Finland)
- 9 Primal joints and hind-leg cuts of entire and castrated Javan rusa (*Cervus timorensis russa*) stags R. SOOKHAREEA, D.G. TAYLOR, G.MCL. DRYDEN, K.B. WOODFORD (Australia)
- 17 The effect of ageing on the water-holding capacity of pork: role of cytoskeletal proteins L. KRISTENSEN, P.P. PURSLOW (Denmark)
- Differentiation of dietary regimene of Iberian swine by means of isotopic analysis of carbon and sulphur in hepatic tissue I. GONZÁLEZ-MARTIN, C. GONZÁLEZ PÉREZ, J. HERNÁNDEZ MÉNDEZ, C. SÁNCHEZ GONZÁLEZ (Spain)
- 31 Detection of mechanically recovered chicken meat using capillary gel electrophoresis L. DAY, H. BROWN (UK)
- 39 Application of an exponential model to early postmortem bovine muscle pH decline H.L. BRUCE, J.R. SCOTT, J.M. THOMPSON (Australia)
- Evaluation of the antioxidant potential of natural food/plant extracts as compared with synthetic antioxidants and vitamin E in raw and cooked pork patties

  T.L. MCCARTHY, J.P. KERRY, J.F. KERRY, P.B. LYNCH, D.J. BUCKLEY (Ireland)
- Assessment of cooked alpaca and llama meats from the statistical analysis of data collected using an 'electronic nose' K. NEELY, C. TAYLOR, O. PROSSER, P.F. HAMLYN (UK)
- 59 A novel polymerase chain reaction (PCR) denaturing gradient gel electrophoresis (DGGE) for the identification of Micrococcaceae strains involved in meat fermentations. Its application to naturally fermented Italian sausages L. COCOLIN, M. MANZANO, D. AGGIO, C. CANTONI, G. COMI (Italy)
- 65 Effect of air relative humidity on ham rind and subcutaneous salted fat during the resting period J. ARNAU, P. GOU (Spain)
- 69 Beef colour evolution as a function of ultimate pH M. ABRIL, M.M. CAMPO (Spain), A. ÖNENÇ (Turkey), C. SAÑUDO, P. ALBERTÍ, A.I. NEGUERUELA (Spain)
- 79 Factors affecting the pH decline in lamb after slaughter B. MCGEEHIN, J.J. SHERIDAN, F. BUTLER (Ireland)
- 85 Subcutaneous and intermuscular fat characterisation of dry-cured Iberian hams M.L. TIMÓN, J. VENTANAS, A.I. CARRAPISO, A. JURADO, C. GARCÍA (Spain)
- 93 Volatile compounds released during ripening in Italian dried sausage L.O. SUNESEN (Denmark), V. DORIGONI, E. ZANARDI (Italy), L. STAHNKE (Denmark)
- Physicochemical and sensory properties of Galician chorizo sausage preserved by refrigeration, freezing, oil-immersion, or vacuum-packing
  E. FERNÁNDEZ, M.A. ROMERO-RODRÍGUEZ, M.L. VÁZQUEZ-ODÉRIZ (Spain)
- 105 AMSA membership: benefits and application
- 107 Announcement

- Flavour profiles of dry sausages fermented by selected novel meat starter cultures
  S. ERKKILÄ, E. PETÄJÄ, S. EEROLA, L. LILLEBERG, T. MATTILA-SANDHOLM, M.-L. SUIHKO (Finland)
- Antioxidative effects of cottonseed meals as evaluated in cooked meat K.S. RHEE, Y.A. ZIPRIN, M.C. CALHOUN (USA)

- 125 Lipid and protein oxidation in microsomal fraction from turkeys: influence of dietary fat and vitamin E supplementation Y. MERCIER, P. GATELLIER, A. VINCENT, M. RENERRE (France)
- 135 The effect of time and type of electrical stimulation on the calpain system and meat tenderness in beef longissimus dorsi muscle
  I.H. HWANG, J.M. THOMPSON (Australia)
- 145 Determination of meat pH temperature relationship using ISFET and glass electrode instruments M.L. JANSEN (New Zealand)
- 151 Comparison of the color stability and lipid oxidative stability of fresh and vacuum packaged lamb muscle containing elevated omega-3 and omega-6 fatty acid levels from dietary manipulation E.N. PONNAMPALAM, G.R. TROUT, A.J. SINCLAIR, A.R. EGAN, B.J. LEURY (Australia)
- Biogenic amines produced by Enterobacteriaceae isolated from meat products F. DURLU-ÖZKAYA, K. AYHAN, N. VURAL (Turkey)
- The interaction between pH and temperature decline early postmortem on the calpain system and objective tenderness in electrically stimulated beef *longissimus dorsi* muscle I.H. HWANG, J.M. THOMPSON (Australia)
- 175 Study of the branched hydrocarbon fraction of intramuscular lipids from Iberian fresh ham J.F. TEJEDA, T. ANTEQUERA, L. MARTIN, J. VENTANAS, C. GARCIA (Spain)
- The effect of breed-production systems on the myosin heavy chain 1, the biochemical characteristics and the colour variables of Longissimus thoracis from seven Spanish beef cattle breeds
  M. GIL, X. SERRA, M. GISPERT, M. ANGELS OLIVER, C. SAÑUDO, B. PANEA, J.L. OLLETA, M. CAMPO, M. OLIVAN, K. OSORO, M.D. GARCIA-CACHAN, R. CRUZ-SAGREDO, M. IZQUIERDO, M. ESPEJO, M. MARTIN, J. PIEDRAFITA (Spain)
- Improvement of the physicochemical properties of pale soft and exudative (PSE) pork meat products with an extract from mechanically deboned turkey meat (MDTM)
  C.-T. LI, M. WICK (USA)
- 197 Pork meat quality affects peptide and amino acid profiles during the ageing process V.-J. MOYA, M. FLORES, M.-C. ARISTOY, F. TOLDRÁ (Spain)
- 207 Diverse lamb genotypes 4. Predicting the yield of saleable meat and high value trimmed cuts from carcass measurements E. SAFARI, D.L. HOPKINS, N.M. FOGARTY (Australia)
- 215 Erratum
- 217 AMSA membership: benefits and application
- 219 Announcement

- 223 Effect of rearing system on muscle lipids of gilts and castrated male pigs A. HÖGBERG, J. PICKOVA, P.C. DUTTA, J. BABOL, A.C. BYLUND (Sweden)
- 231 Effect of low voltage electrical stimulation and temperature conditioning on postmortem changes in glycolysis and calpains activities of Korean native cattle (Hanwoo)

  M.S. RHEE, B.C. KIM (South Korea)
- Evaluation of electric belt grill, forced-air convection oven, and electric broiler cookery methods for beef tenderness research T.E. LAWRENCE, D.A. KING, E. OBUZ, E.J. YANCEY, M.E. DIKEMAN (USA)
- The preference of the consumer for pork from homozygous or heterozygous halothane negative animals M.J. VAN OECKEL, N. WARNANTS, C.V. BOUCQUÉ, P. DELPUTTE, J. DEPUYDT (Belgium)
- Presensitization of microorganisms by acid treatments to low dose gamma irradiation with special reference to Bacillus cereus
  M.R. BHIDE, A.M. PATURKAR, A.T. SHERIKAR, V.S. WASKAR (India)
- The use of multivariate analysis for evaluating relationships among fat depots in heavy pigs of different genotypes O. FRANCI, C. PUGLIESE, R. BOZZI, A. ACCIAIOLI, G. PARISI (Italy)

- Free range rearing of pigs with access to pasture grazing effect on fatty acid composition and lipid oxidation products V. NILZÉN, J. BABOL, P.C. DUTTA, N. LUNDEHEIM, A.-C. ENFÄLT, K. LUNDSTRÖM (Sweden)
- 277 Effect of suckling on growth and quantitative and qualitative carcass traits of once-calved heifers M. ZEMBAYASHI (Japan)
- 283 Tenderization of chicken and turkey breasts with electrically produced hydrodynamic shockwaves J.R. CLAUS, J.K. SCHILLING, N.G. MARRIOTT, S.E. DUNCAN, M.B. SOLOMON, H. WANG (USA)
- 287 Hydrodynamic shockwave tenderization effects using a cylinder processor on early deboned broiler breasts J.R. CLAUS, J.K. SCHILLING, N.G. MARRIOTT, S.E. DUNCAN, M.B. SOLOMON, H. WANG (USA)
- Fatty acid composition of M. longissimus lumborum, ultimate muscle pH values and carcass parameters in reindeer (Rangifer tarandus L) grazed on natural pasture or fed a commercial feed mixture E. WIKLUND, J. PICKOVA, S. SAMPELS, K. LUNDSTRÖM (Sweden)
- 299 Determination of fatty acid composition of pork fat by Fourier transform infrared spectroscopy A. RIPOCHE, A.S. GUILLARD (France)
- 305 Evaluation of the electrical impedance spectroscopy (EIS) equipment for ham meat quality selection M.A. OLIVER, I. GOBANTES, J. ARNAU, J. ELVIRA, P. RIU, N. GRÈBOL, J.M. MONFORT (Spain)
- 313 Effects of the stunning procedure and the halothane genotype on meat quality and incidence of haemorrhages in pigs A. VELARDE, M. GISPERT, L. FAUCITANO, P. ALONSO, X. MANTECA, A. DIESTRE (Spain)
- 321 Fatty acid composition, cooking loss and texture of beef patties from meat of bulls fed different fats M.R.L. SCHEEDER, M.M. CASUTT, M. ROULIN, F. ESCHER, P.-A. DUFEY, M. KREUZER (Switzerland)

#### **Short communication**

- 329 Superficial contamination of bovine carcasses by Escherichia coli O157:H7 in a slaughterhouse in Normandy (France) R. GUYON, F. DOREY, J.P. MALAS, F. GRIMONT, J. FORET, B. ROUVIÈRE, J.F. COLLOBERT (France)
- 333 AMSA membership: benefits and application
- 335 Announcement

- 337 Addition of synthetic and natural antioxidants to α-tocopheryl acetate supplemented beef patties: effects of antioxidants and packaging on lipid oxidation
  Z. FORMANEK (Hungary), J.P. KERRY, F.M. HIGGINS, D.J. BUCKLEY, P.A. MORRISSEY (Ireland),
  J. FARKAS (Hungary)
- Occurrence of Escherichia coli O157:H7, Listeria monocytogenes, Salmonella and Campylobacter spp. on beef carcasses in Northern Ireland R.H. MADDEN, W.E. ESPIE, L. MORAN, J. McBRIDE, P. SCATES (UK)
- 347 Effect of pre-slaughter physiological conditions on the oxidative stability of colour and lipid during chill storage of pork D. JUNCHER, B. RØNN, E.T. MORTENSEN, P. HENCKEL, A. KARLSSON, L.H. SKIBSTED, G. BERTELSEN (Denmark)
- Productivity and carcass characteristics of pure and crossbred Chinese Yellow Cattle G.H. ZHOU, L. LIU, X.L. XIU, H.M. JIAN, L.Z. WANG, B.Z. SUN, B.S. TONG (PR China)
- 363 Post-mortem evolution of non-protein nitrogen and its peptide composition in growing lamb muscles M.N. SYLVESTRE, C. FEIDT, J. BRUN-BELLUT (France)
- 371 Use of calcium lactate with salt-phosphate and alginate-calcium gels in restructured pork rolls S. DEVATKAL, S.K. MENDIRATTA (India)
- 381 Carcass traits, muscle characteristics, and palatability attributes of lambs expressing the callipyge phenotype K.J. GOODSON, R.K. MILLER, J.W. SAVELL (USA)
- 389 Effect of dietary α-tocopherol supplementation on color and lipid stability in pork A.L. PHILLIPS, C. FAUSTMAN, M.P. LYNCH, K.E. GOVONI, T.A. HOAGLAND, S.A. ZINN (USA)
- Analysis of visible reflectance spectra of stored, cooked and diseased chicken meats Y. LIU, Y.-R. CHEN (USA)

- 403 Effects of dietary vitamin E supplementation and packaging on the colour stability of sliced pasteurized beef ham J.H. HOUBEN, A. VAN DIJK (The Netherlands)
- 409 Effect of substituting pork backfat with rind on quality characteristics of pork sausage S.S. ABIOLA, S.W. ADEGBAJU (Nigeria)
- Influence of weak organic acids and salts on the denaturation characteristics of intramuscular connective tissue.

  A differential scanning calorimetry study

  N. AKTAŞ, M. KAYA (Turkey)
- The effects of ascorbic acid, taurine, carnosine and rosemary powder on colour and lipid stability of beef patties packaged in modified atmosphere

  A. SÁNCHEZ-ESCALANTE, D. DJENANE, G. TORRESCANO, J.A. BELTRÁN, P. RONCALÉS (Spain)
- 431 Cholesterol oxidation products in irradiated raw meat with different packaging and storage time<sup>th</sup> K.C. NAM, M. DU, C. JO, D.U. AHN (USA)
- 437 Book review
- 439 AMSA membership: benefits and application
- 441 Announcement

# Contents of Volume 59

### Number 1

# **Editorial**

Twenty-five years of "Meat Science"
 R. LAWRIE (UK)

#### Review

5 Healthier meat and meat products: their role as functional foods F. JIMÉNEZ-COLMENERO, J. CARBALLO, S. COFRADES (Spain)

## **Papers**

- 15 Lipolytic and proteolytic properties of dry-cured boneless hams ripened in modified atmospheres F.-S. WANG (Taiwan)
- 23 Colour of beef heated to different temperatures as related to meat ageing L. GAŠPERLIN, B. ŽLENDER, V. ABRAM (Slovenia)
- Very fast chilling of beef: effects on meat quality
  W. VAN MOESEKE, S. DE SMET, E. CLAEYS, D. DEMEYER (Belgium)
- Oxidative stability and fatty acid composition of pig muscles as affected by rearing system, crossbreeding and metabolic type of muscle fibre
  A.I. ANDRÉS, R. CAVA, A.I. MAYORAL, J.F. TEJEDA, D. MORCUENDE, J. RUIZ (Spain)
- 49 Relationships between muscle characteristics and meat quality traits of young Charolais bulls G. RENAND, B. PICARD, C. TOURAILLE, P. BERGE, J. LEPETIT (France)
- 61 Characterization of peptides released from rabbit skeletal muscle troponin-T by μ-calpain under conditions of low temperature and high ionic strength M.C. HUGHES, S. GEARY (Ireland), E. DRANSFIELD (France), P.L.H. McSWEENEY, E.E. O'NEILL (Ireland)
- 71 Quality changes and shelf life of imported vacuum-packaged beef chuck during storage at 0°C K.-T. LEE, C.-S. YOON (South Korea)
- 79 Inhibition of the proliferation of myeloma cells by the meat origin strain *Enterococcus faecium* CH3 A. ZABALA, R. MARTÍN, A. HAZA, L. FERNÁNDEZ, P. MORALES, J.M. RODRÍGUEZ (Spain)
- Microbial and physico-chemical changes during the ripening of dry fermented sausages superficially inoculated with or having added an intracellular cell-free extract of *Penicillium aurantiogriseum*J.M. BRUNA, J.A. ORDÓÑEZ, M. FERNÁNDEZ, B. HERRANZ, L. DE LA HOZ (Spain)

- 97 The contribution of *Penicillium aurantiogriseum* to the volatile composition and sensory quality of dry fermented sausages J.M. BRUNA (Spain), E.M. HIERRO (UK), L. DE LA HOZ (Spain), D.S. MOTTRAM (UK), M. FERNÁNDEZ, J.A. ORDÓNEZ (Spain)
- 109 AMSA membership: benefits and application
- 111 Announcement

- Reduction of *Bacillus subtilis*, *Bacillus stearothermophilus* and *Streptococcus faecalis* in meat batters by temperature-high hydrostatic pressure pasteurization

  F. MOERMAN, B. MERTENS, L. DEMEY, A. HUYGHEBAERT (Belgium)
- The effect of stress during lairage and stunning on muscle metabolism and drip loss in Danish pork S. STØIER, M.D. AASLYNG, E.V. OLSEN, P. HENCKEL (Denmark)
- Effect of a dietary vitamin E supplementation on colour stability and lipid oxidation of air- and modified atmosphere-packaged beef
  P. GATELLIER, C. HAMELIN, Y. DURAND, M. RENERRE (France)
- Contribution of pigment content, myoglobin forms and internal reflectance to the colour of pork loin and ham from pure breed pigs
   G. LINDAHL, K. LUNDSTRÖM, E. TORNBERG (Sweden)
- 153 Marbling effects on quality characteristics of pork loin chops: consumer purchase intent, visual and sensory characteristics M.S. BREWER, L.G. ZHU, F.K. McKEITH (USA)
- 165 Comparison of destructively and rinsing gained samples to determine TVC of pig carcasses by bioluminescence H.-D. WERLEIN (Germany)
- 169 Arcobacter spp. enumeration in poultry meat using a combined PCR-ELISA assay A. ANTOLÍN, I. GONZÁLEZ, T. GARCÍA, P.E. HERNÁNDEZ, R. MARTÍN (Spain)
- 175 Inhibition of protease activity. Part 1. The effect on tenderness and indicators of proteolysis in ovine muscle D.L. HOPKINS, J.M. THOMPSON (Australia)
- 187 Effect of illumination source on the appearance of fresh meat cuts S. BARBUT (Canada)
- 193 Pressure-induced changes in the connectin/titin localization in the myofibrils revealed by immunoelectron microscopy A. SUZUKI, Y. HOMMA, K. KIM, Y. IKEUCHI, T. SUGIYAMA, M. SAITO (Japan)
- 199 Inhibition of protease activity 2. Degradation of myofibrillar proteins, myofibril examination and determination of free calcium levels D.L. HOPKINS, J.M. THOMPSON (Australia)
- 211 Electrical stimulation of red deer (*Cervus elaphus*) carcasses effects on rate of pH-decline, meat tenderness, colour stability and water-holding capacity
  E. WIKLUND (Sweden), J.M. STEVENSON-BARRY, S.J. DUNCAN, R.P. LITTLEJOHN (New Zealand)

- Quality properties of sausage made with gamma-irradiated natural pork and lamb casing M.W. BYUN, J.W. LEE, C. JO, H.S. YOOK (South Korea)
- Sensory and chemical analysis of cooked porcine meat patties in relation to warmed-over flavour and pre-slaughter stress D.V. BYRNE, W.L.P. BREDIE, L.S. BAK, G. BERTELSEN, H. MARTENS, M. MARTENS (Denmark)
- Effect of replacing pork backfat with pre-emulsified olive oil on lipid fraction and sensory quality of Chorizo de Pamplona a traditional Spanish fermented sausage E. MUGUERZA, O. GIMENO, D. ANSORENA (Spain), J.G. BLOUKAS (Greece), I. ASTIASARÁN (Spain)
- Meat cut and injection level affects the tenderness and cook yield of processed roast beef J.A. BOLES, P.J. SHAND (USA)
- 267 Effect of starter culture and storage temperature on the content of biogenic amines in dry fermented sausage poličan T. KOMPRDA, J. NEZNALOVÁ, S. STANDARA (Czech Republic), S. BOVER-CID (Spain)

- Meat quality of mixed sex lambs grazing pasture and supplemented with, roughage, oats or oats and sunflower meal D.L. HOPKINS, D.G. HALL, H.A. CHANNON, P.J. HOLST (Australia)
- 285 Skatole and indole concentrations in *Longissimus dorsi* and fat samples of pigs M.A. RIUS, J.A. GARCIA-REGUEIRO (Spain)
- The effect of ultra-rapid chilling and subsequent ageing on the calpain/calpastatin system and myofibrillar degradation in lamb M. longissimus thoracis et lumborum G.A. REDMOND, B. MCGEEHIN, J.J. SHERIDAN, F. BUTLER (Ireland)
- 303 Impact of introducing specifications on the tenderness of retail meat R. BICKERSTAFFE, A.E.D. BEKHIT, L.J. ROBERTSON, N. ROBERTS, G.H. GEESINK (New Zealand)
- 317 Evaluation of carbon monoxide treatment in modified atmosphere packaging or vacuum packaging to increase color stability of fresh beef
  P. JAYASINGH, D.P. CORNFORTH, C.E. CARPENTER, D. WHITTIER (USA)
- Fatty acid composition of adipose depots of suckling lambs raised under different production systems
  S. VELASCO, V. CAÑEQUE, C. PÉREZ, S. LAUZURICA, M.T. DÍAZ, F. HUIDOBRO, C. MANZANARES,
  J. GONZÁLEZ (Spain)

#### **Technical** note

- 335 Comparison of meat quality characteristics between young and old ostriches L.C. HOFFMAN, P. FISHER (South Africa)
- 339 Book review
- 341 AMSA membership: benefits and application

- Quality characteristics of reduced-fat Chinese-style sausage as related to chitosan's molecular weight K.-W. LIN, J.-Y. CHAO (R.O.C.)
- Reaction to boar odour by different South African consumer groups
  H.L. DE KOCK, S.M. VAN HEERDEN, P.H. HEINZE (South Africa), G.B. DIJKSTERHUIS (Denmark),
  A. MINNAAR (South Africa)
- Free amino acids and other non-volatile compounds formed during processing of Iberian ham L. MARTIN, T. ANTEQUERA, J. VENTANAS, R. BENITEZ-DONOSO, J.J. CÓRDOBA (Spain)
- Quality properties of pork sausage prepared with water-soluble chitosan oligomer C. JO, J.W. LEE, K.H. LEE, M.W. BYUN (South Korea)
- 377 Characterization of traditional processing of pork meat into *boucané* I. POLIGNÉ, A. COLLIGNAN, G. TRYSTRAM (France)
- 391 Biogenic amine accumulation in ripened sausages affected by the addition of sodium sulphite S. BOVER-CID, M.J. MIGUÉLEZ-ARRIZADO, M.C. VIDAL-CAROU (Spain)
- 397 Strategic finishing feeding as a tool in the control of pork quality
  K. ROSENVOLD, H.N. LÆRKE, S.K. JENSEN, A.H. KARLSSON (Denmark), K. LUNDSTRÖM (Sweden),
  H.J. ANDERSEN (Denmark)
- 407 Relationship between lipid peroxidation and fat content in Japanese Black beef *Longissimus* muscle during storage K. SASAKI, M. MITSUMOTO, K. KAWABATA (Japan)
- 411 Chromatographic analysis of cadaverine to detect incipient spoilage in mutton K.V. KUMUDAVALLY, A. SHOBHA, T.S. VASUNDHARA, K. RADHAKRISHNA (India)
- 417 Evidence against the non-enzymatic calcium theory of tenderization G.H. GEESINK (New Zealand), R.G. TAYLOR (France), A.E.D. BEKHIT, R. BICKERSTAFFE (New Zealand)
- Factors affecting the composition and amount of 'white exudate' from cooked bacon P.R. SHEARD, A.A. TAYLOR, A.W.J. SAVAGE, A.M. ROBINSON, R.I. RICHARDSON, G.R. NUTE (UK)

- Antagonistic effect on Listeria monocytogenes and L. innocua of a bacteriocin-like metabolite produced by lactic acid bacteria isolated from sucuk
  A.H. ÇON, H.Y. GÖKALP, M. KAYA (Turkey)
- 443 AMSA membership: benefits and application

